

CLAIMS

1. A stent delivery system comprising:

a stent delivery catheter, the stent delivery catheter having a balloon mounted thereon, the balloon having an unexpanded position and an expanded position, the balloon

5 having at least one waist portion, at least one cone portion and at least one body portion;

a stent disposed about the at least one body portion, the stent having an expanded state and an unexpanded state;

at least one sleeve, the at least one sleeve having a waist overlay portion, a cone overlay portion, and a stent overlay portion, when the stent is in the unexpanded state

10 the waist overlay portion being engaged to at least a portion of the at least one waist portion and the cone overlay portion being disposed about the at least one cone portion and the stent overlay portion being disposed about at least a portion of the stent,

the at least one sleeve having at least one lubricant application port, the at least one lubricant application port defining an opening through the at least one sleeve, the

15 opening constructed and arranged to allow a lubricious substance to pass through the at least one sleeve and at least partially coat a portion of the balloon.

2. The stent delivery system of claim 1 wherein the at least one lubricant application port is at least partially defined by the waist overlay portion.

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3. The stent delivery system of claim 1 wherein the at least one lubricant application port is at least partially defined by the cone overlay portion.

4. The stent delivery system of claim 3 wherein the at least one lubricant application

25 port is at least partially defined by a portion of the stent overlay portion.

5. The stent delivery catheter of claim 4 wherein the portion of the stent overlay portion is constructed and arranged to fracture during expansion of the stent from the unexpanded state to the expanded state.

6. The stent delivery system of claim 5 wherein the at least one lubricant application port further comprises at least one tear-away lubricant application port and at least one standard lubricant application port, the at least one tear-away lubricant application port at least partially defined by the portion of the stent overlay portion, the at least one lubricant application port being positioned elsewhere through the at least one sleeve.

7. The stent delivery system of claim 5 wherein the at least one sleeve is constructed and arranged to retract off of a stent subsequent to the fracture of the portion of the stent overlay portion.

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8. An elastomeric sleeve constructed and arranged to retain a stent in the unexpanded state on a stent delivery catheter, the elastomeric sleeve comprising:

an inside surface, and at least one lubricant application port

the at least one lubricant application port defining an opening through the at

15 least one sleeve, the opening constructed and arranged to allow a lubricious substance to pass through the at least one sleeve and coat at least a portion of the inside surface.

9. The elastomeric sleeve of claim 8 further comprising a first sleeve and a second sleeve, the first sleeve and second sleeve each constructed and arranged to be disposed about
20 an end of a stent delivery balloon.